

Remarks and Arguments

Claims 1-7 were presented for examination.

Claims 1-7 have been rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No 6,057,839 (Advani.) The examiner cites Advani Figure 6A and the description of Figure 6A at column 9, line 3 to column 10, line 28. The Advani reference is directed towards displaying activity over time of multiple processors in a computing system. Figure 6A shows multiple strip graphs. Each strip graph illustrates the activity of one specific processor over time. Furthermore, statistical parameters are calculated, like the average activity of the processors over time, mean and standard deviation of the activity over all processors. These statistical parameters are shown as additional graphs in the strip graphs together with the activity graphs.

The present invention as disclosed and claimed differs from the teaching of Advani in several aspects. For example, in the present invention, each peak-containing data string or peak list is assigned to a sample being analyzed and which generates the data and the data strings are processed with a pattern recognition algorithm. For example, this step is recited in claim, step (b) lines 6-8 – "...calculating significant patterns, correlations or classifications within one or between different collections of the peak-containing data strings or the peak lists by pattern recognition algorithms..."

In this respect, a "sample" corresponds to a "processor" in the Advani reference since the processor is the entity that is generating the data. With this correspondence, it is clear in Advani that no processing of data strings by a pattern recognition algorithm is disclosed. The examiner refers to Advani, column 9, lines 37-52 as disclosing pattern recognition algorithms. However, this paragraph of Advani clearly refers to the aforementioned statistical processing and not to pattern recognition which involves a classification of data.

Furthermore, neither a correlation nor a classification is performed by an algorithm. Any pattern investigation is solely performed by the user after the statistical parameters are displayed within the strip graphs. This is clearly set forth in Advani at column 9, lines 49-52 which disclose "As the user scrolls up

and down the stack of processor strips, the display for any processor which spends a large amount of time significantly above or below the average across all the processors will catch the user's eye." Consequently, in Advani, the user cannot get any results related to pattern investigation without first generating a graphical display. In contrast, in the present invention as recited, for example, in claim 1, the results of the pattern investigation are only visualized in step (c) by "highlighting, in the graphical display ... the peaks significantly participating in the calculation of the significant patterns, correlations or classifications" where the calculation of the significant patterns, correlations or classifications has already been performed in step (b) in order to determine which peaks significantly participate. Thus, the calculations performed by the pattern recognition algorithms precede any graphical presentation.

In addition, the Advani reference does not disclose that significant peaks are highlighted. The term "peak", as defined in the current specification, corresponds to a feature that is present in all samples, for example, a mass to charge ratio in a mass spectrum or a retention time in a chromatogram. This is set forth in the present specification at paragraph [03] (page 1, line 23) which recites:

"These strings of digital data can be displayed in a two-dimensional diagram showing the peaks within the data strings in graphical form. The notion "peak" designates not only just one peak in a single data string but, in a broader sense, all related peaks in the collection of data strings with a common scaling parameter value."

In the Advani reference, the term "peak" corresponds to an activity peak of a single processor, but not to the activity of all processors at a particular time as it would have to be in order to correspond to the present invention. For example, see Advani, column 9, lines 49-52, which discloses "As the user scrolls up and down the stack of processor strips, the display for any processor which spends a large amount of time significantly above or below the average across all the processors will catch the user's eye." (emphasis added) Thus, Advani does not disclose "...highlighting, in the graphical display of the peak-containing data strings or the peak lists, the peaks significantly

participating in the calculation of the significant patterns, correlations or classifications.” as recited in claim 1, step (c), lines 11-13.

Since Advani does not disclose significant features recited in claim 1, claim 1 patentably distinguishes over the cited reference.

Claims 2-7 depend, either directly or indirectly, on claim 1 and incorporate the limitations thereof. Therefore, they also patentably distinguish over the cited reference in the same manner as claim 1. In addition, these claims recite additional features and limitations not disclosed in the Advani reference. For example, claim 2 recites that the peak-containing data strings are displayed, in claim 1 step (a), by a density plot. The examiner refers to Advani Figure 6A as disclosing density plots. However, Advani Figure 6A shows line graphs and not density plots as illustrated in the lower portion of Figure 1 of the present invention. Therefore, claim 2 patentably distinguishes over the cited reference for this reason also.

In light of the forgoing amendments and remarks, this application is now believed in condition for allowance and a notice of allowance is earnestly solicited. If the examiner has any further questions regarding this amendment, he is invited to call applicants' attorney at the number listed below. The examiner is hereby authorized to charge any fees or direct any payment under 37 C.F.R. §§1.17, 1.16 to Deposit Account number 50-3969.

Respectfully submitted

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